

REMARKS

Claims 1, 3-6, 8-11 and 13-25 are pending in this application. By this Amendment, claims 1, 8, 9 and 11 are amended. Support for the amendments to claims 8 and 9 can be found at least in Paragraph [0100] of Applicant's specification. Support for the amendments to claims 1 and 11 can be found at least in paragraph [0081] of Applicant's specification. No new matter is added.

The courtesies extended to Applicant's representative by Examiner Olaniran at the interview held January 13, 2010, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicant's record of the interview.

The Office Action objects to claims 8 and 9 for improper antecedent basis. The Office Action asserts that "the parameters" in line 2 of claim 8 and in line 3 of claim 9 lack antecedent basis. Claims 8 and 9, as amended, now recite "the transmission parameters" and have proper antecedent basis. Withdrawal of the objection of claims 8 and 9 is respectfully requested.

The Office Action rejects claims 1, 3-6, 8-11, 13-23 and 25 under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2001/0007591 to Pompei in view of U.S. Patent No. 4,896,304 to Tanigawa and U.S. Patent No. 5,986,972 to Li. The Office Action also rejects claim 24 under 35 U.S.C. §103(a) over Pompei, Tanigawa and Li in view of U.S. Patent No. 4,875,198 to Ariav. These rejections are respectfully traversed.

As discussed during the interview, none of the cited references discloses or renders obvious, alone or in combination, "learning, based on the plurality of reflected hypersonic signals, sets of transmission parameters that are sets of phases for optimally steering and focusing the hypersonic beams in order to maximize transmission of the hypersonic beams and audible power to the plurality of objects," as recited in claim 1, and "a device that learns,

based on the echo signals, sets of transmission parameters that are sets of phases for optimally steering and focusing the hypersonic beams in order to maximize transmission of the hypersonic beams and audible power to the plurality of objects," as recited in claim 11. Page 4 of the Office Action acknowledges that Pompei in view of Tanigawa does not explicitly disclose learning sets of transmission parameters for optimal focus on said objects, storing the set of transmission parameters and computing a resultant set of transmission parameters based on the stored sets of transmission parameters. The Office Action asserts that Tanigawa, col. 4, lines 11-20 discloses the resultant transmission parameters of delay, frequency and amplitude and Li discloses learning, storing, and computing of the transmission parameters.

However, the alleged transmission parameters in Tanigawa and Li are of different characteristics than the transmission parameters in the presently claimed invention. Specifically, Tanigawa's alleged transmission parameters relate to ultrasonic sensors and does not disclose using focused hypersonic beams or learning the transmission parameters of the hypersonic beams for optimally steering and focusing the hypersonic beams in order to maximize transmission of the hypersonic beams and audible power to the plurality of objects. Similarly Li's alleged transmission parameters do not relate to projection of audible power using focused hypersonic beams. Therefore, neither Tanigawa nor Li discloses or renders obvious "sets of transmission parameters that are sets of phases for optimally steering and focusing the hypersonic beams in order to maximize transmission of the hypersonic beams and audible power to the plurality of objects," as recited in claims 1 and 11. Pompei and Ariav do not cure the deficiency of Tanigawa and Li.

Furthermore, neither Tanigawa nor Li discloses or renders obvious "learning, based on the plurality of reflected hypersonic signals," as recited in claim 1, and "a device that learns, based on the echo signals," as recited in claim 11. By contrast, Li for example, discloses adjustment of hypersonic signals based on measurements taken at a "far field plane 100." See

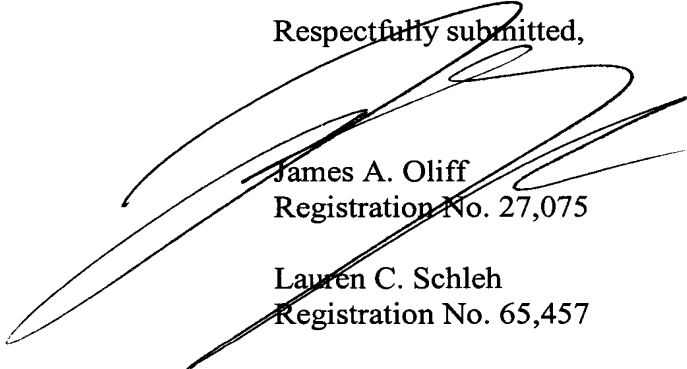
Li col. 3, lines 2-13. Li's measurements taken at a "far field plane 100" measure the transmitted hypersonic signals, not reflected hypersonic signals.

Therefore, independent claims 1 and 11 are not obvious in view of Pompei, Tanigawa and Li. Claims 3-6, 8-10 and 13-25 are also not obvious by virtue of their dependencies upon claims 1 and 11, as well as for the additional allowable subject matters they recite. Withdrawal of the rejections of claims 1, 3-6, 8-11 and 13-25 under 35 U.S.C. §103(a) are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Request for Continued Examination

Date: March 3, 2010

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